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Review of "Twenty-eighth Annual Alberta Soil Science Workshop Proceedings" by David T. Lewis

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BOOK REVIEWS

Twenty-eighth Annual Alberta Soil Science Workshop Proceedings. D.R. Bennett, Editor, Land Evaluations Reclamation Branch, Alberta Agriculture, Lethbridge, Alberta, 1991. 363 pp. Tables, and bibliographies. \$25 paper.

This volume compiles the papers of a workshop that had several foci: the philosophies of soil conservation, the sweeping generalizations from LANDSAT data and their use in GIS, and the infinite detail of classification and genesis of soils, quantification of soil productivity, and techniques for the injection of nitrogen into the soil. The theme of this particular workshop was "Sustainable Agriculture—A Soil Science Perspective." Canadian agricultural scientists, as their U.S. counterparts, appear to have latched onto the buzz word "sustainable." Neither group seems to be able to define clearly what the phrase means. Fortunately for the reader, there is no paper attempting to define the subject included in the book. The phrase simply suggests a system of agriculture that (from our present perspective) can be relied upon for the foreseeable future. Modern methods (even those considered to be "sustainable") known today are not sustainable over the generations ahead because they in total use more energy than they produce. Hence, at some time in the dimly distant future, the huge machines shall grind to a halt, the nitrogen fertilizers shall vanish, and the last pest shall perish from one of the vast array of agricultural chemicals. This is unless (of course) technology comes to our rescue with a new source of energy to use in the manufacture of these items, and the operation of these machines.

"Sustainable agriculture" is a current hope for the future of agriculture (and for human cultures). The concept is not unlike agriculture as it was prior to monocultures and chemicals. Yet, it too relies on chemical inputs, on machine power, and on irrigation from aquifers becoming more and more depleted. It remains to be seen if the emerging bureaucracy of "sustainable agriculture" will be able to do anything concrete before it becomes bound up in the abstraction to which something "undefinable" often leads.

But the book, of which this review is written, did not cause all this, and contains a vast array of useful information. It is well to describe its contents, at least in a general way. The workshop divisions were a plenary session with papers that treat the topic and philosophy of sustainable agriculture (4 papers), a session on soil reclamation (4 papers), a session on soil fertility (4 papers), a session on soil inventory (4 papers), and a session on soil conservation (2 papers). These papers are followed by 20 “volunteer papers” that cover a wide range of topics in soil/plant science. Most relate only indirectly to the topic of sustainable agriculture. Most of the papers included in this volume use a format of introduction, methods, results/discussion, and conclusions followed by literature citations adequate to cover the topic. Tabular and graphic data are presented, and methods used to analyze variance are described. All papers appear to be well prepared, and of top quality. I suspect that they would be acceptable to most scientific journals dealing with these subjects.

In summary, this is a book of papers about recent research on the topic of soil/plant science in Alberta. The theme is that of sustainable agriculture, a phrase that appears to defy definition—at least agreed upon definition. Most of the papers in the book relate only indirectly to the theme. It is a reference book that would be of use mainly to professionals in soil or plant science, or for upper level classes on the subject. **David T. Lewis**, *Department of Agronomy, University of Nebraska-Lincoln*.